

AMENDMENTS TO THE SPECIFICATION

Please amend the specification by rewriting the following paragraphs, as set forth below in marked-up form.

Please amend the paragraph beginning on page 14, line 17 and continuing onto page 15, with the following paragraph:

As is generally known and understood, helium gas evaporating in the dewar 2 leaves the dewar 2 from its neck tube and flows through the mass flowmeter MF3, normally open electromagnetic valve EV1, inflow valve V13, circulating pump 7, outflow valve V12, and filter F1. The circuit then diverges in two directions. One circuit runs through the constant flow control valve MFC2 in the near-40K line, check valve CV2, the 2nd refiner 6B, in which the gas is refined and reaches the cooler 5. The other circuit passes through the check valve CV6, filter F2, constant flow control valve MFC1 in the near-4K line, check valve CV1, the 1st refiner 6A, in which the gas is refined and reaches the cooler 5. The refined helium gas in the 1st refiner 6A is cooled to about 40K in the 1st cooling stage 5A of the cooler 5. The cooled helium gas is, as shown in Figure 1, supplied to the dewar 2 through the neck of the dewar as a cooling helium gas at about 40K. Helium gas in the near-4K line that is refined in the 2nd refiner 6B is, as shown in Figure 1, cooled to about 40K in the 1st cooling stage 5A of the cooler 5, then further cooled in the 2nd stage 5B and supplied to the condensing pot 4. The condensing pot 4 is cooled to about 4K by cryogenic energy from the 2nd stage 5B. Helium gas supplied to the condensing pot is liquefied and supplied to the dewar 2. A portion of the near-4K gas generated in the dewar 2 returns to the condensing pot 4, in which it is liquefied again.

Please amend the paragraph beginning on page 18, line 20 and continuing onto page 19, with the following paragraph:

In Figure 4, the refiner 6 is provided with a heater 84, temperature sensor 85, and contaminant detection sensor 86. The condensing pot 4 is provided with a heater 87 and temperature sensor 88. The heaters 84 and 87 connect to the power source 83 via relay switches 82A and 82B, respectively. The normally open relay switches 82A and 82B close on receiving the command from

the controller 81. The controller 81 connects to the cooler 5, circulating pump 7, purge pump 8, electromagnetic valves EV1 through EV7, and contaminant detection sensor 86 (~~not shown~~) installed on the refiner 6 (a pressure sensor, a flow velocity sensor or a sensor to detect the thickness or other property of the contaminants that accumulate in the refiner). The controller 81 also connects to the temperature sensors 85 and 88 to monitor the temperature of the heaters 84 and 87, respectively.

Please amend the paragraph beginning on page 34, line 9 and continuing onto page 35, with the following paragraph:

In Figure 7, the regulating valve NV10, mass flowmeter 4KMF, and flowmeter FM1 are connected in the near-4K line in place of the constant flow control valve MFC1 of the first embodiment. The regulating valve NV11, mass flowmeter 40KMF, and flowmeter FM2 are connected in the near-40K line in place of the constant flow control valve MFC2 of the first embodiment. Helium gas is directly supplied from the helium cylinder 1 to the circulating pump 7 or to the circuits via the selector valves V31 and V32 by opening the selector valve V34. Furthermore, a mass flowmeter MF is connected to the inflow side circuits of the 1st and the 2nd refineries 6A and 6B via a check valve CV, the normally closed electromagnetic valves EV31 and EV32, respectively. The mass flowmeter MF is connected to the inflow valve V13 of the circulating pump 7. An air vent circuit including a normally closed air vent electromagnetic valve EV35 is connected to the line between the selector valve V11 and the normally open electromagnetic valve EV34 installed downstream of the outflow valve V12 of the circulating pump.

Please amend the paragraph beginning on page 35, line 3, with the following paragraph:

In this circulation type liquid helium recondensation device, the helium gas evaporating in the dewar 2 flows, as is generally known and understood, through the selector valve V33, normally open electromagnetic valve EV33, inflow valve V13, circulating pump 7, outflow valve V12, and normally open electromagnetic valve EV34. The circuit then diverges in two directions. One circuit runs through the regulating valve NV10 in the near-4K line and enters the 1st refiner 6A. The other circuit extends through the regulating valve NV11 in the near-40K line and enters the 2nd refiner

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6B. The product is cooled in the 1st and the 2nd cooler, respectively, and supplied to the dewar 2. This operation is the same as that of the 1st embodiment.